SCOPOLAMINE-MORPHINE NARCOSIS in LABOUR

with special reference to the time of administration.

Series of one hundred cases.

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I wish to give in this Paper the results of my experience in the administration of Hyoscin Hydrobromide and Morphine in Labour, and with especial reference to the time of administration of the drugs whereby the optimum and maximum advantage may be gained. This experience extends over 100 cases of Labour all of which cases were under my personal supervision whilst resident in the Royal Maternity Hospital in Edinburgh, under Professor Sir Halliday Croom.

Firstly, as regards the dosage of these drugs. I started off with that dose which had been described in his Paper by Professor Croom as the ideal one, viz:- Hyoscine Hydrobromide gr. $\frac{1}{200}$ combined with morphine gr. $\frac{1}{6}$. And as the effect was found to be so very satisfactory that dosage was adhered to throughout.

It was given of course, hypodermically in solution. The drug - which does not keep very well in solution-is best used in tabloid form.

On several occasions the dose was repeated if the narcosis failed to appear in the usual time, namely, half to three quarters of an hour, or if the narcosis was observed to be disappearing and the patient was still undelivered.

The /

The results therefore of these cases are very comparable, since throughout the dosage was the same.

When was the drug given ?

The narcotic was administered at certain specified times.

The first cases - 25 in number - had the drug administered in the first stage, and the second number of cases in the 2nd stage, as it was found that for reasons given below, the best effect was got if the administration be postponed until early in the Second Stage. Of course, it should be noted that since the action does not take place for half an hour or so, the ideal time is just before the beginning of the second stage - which for our purposes is taken as full dilatation of the os uteri, the time of rupture of the membranes being ignored.

Therefore, in the first 25 cases, the injection was given when the cervix was fully taken up and the os uteri admitted two fingers and when the interval between the pains was not more than 15 minutes. In this series of cases, no less than 45 per cent required instrumental delivery for delay in the second stage.

In all the other cases, the drug was not administered until the os uteri was almost fully dilated, and the labour pains were frequent and strong. /

strong. Less than 18 per cent of these required instrumental aid to finish the labour.

When does the drug take effect ?

It is impossible to say exactly when narcosis comes on, as this varies so much in the individual cases.

The method adopted was to take the normal pains first - take the time of commencement, and the time of stoppage of each pain, and so one got the length of time the pain lasts, and also the interval between each pain. This is done for 15 minutes and then the injection is given, and the pains continued to be counted, and in from half to one hour it was observed that voluntary effort became less, and the patient became drowsy, and lay with eyes closed only becoming awake at the acme of the pains. So that in the later series of cases, half an hour was allowed to elapse before the pains were again counted after the injection.

For how long does it act ?

This varies enormously in different individuals. In two or three cases, the same does was repeated into the opposite limb in two hours or so if no effect was observed, but this did not seem to lengthen appreciably the narcosis - time. The average cases were under the influence of the drug for /

for three or four hours prior to the birth, and the effect lasted for one, two or three hours after parturition.

On the other hand there were several cases in which the patient was in labour for a very considerable time, and the dose did not require to be repeated - notably were those cases (three in number) which were delivered in the continuous Walcher Position. These cases will be referred to later, as this drug seems peculiarly effective for the treatment of such cases.

Now as to the after effects of the injection of Scopolamine - Morphine.

Firstly - On the mother there were no morbid after effects observed.

As a general rule, the recollection of pain was entirely abolished. Even, in those cases in which the patient cried out when the pains were severest, that is at the height of each individual uterine contraction and also when the head was crowning and being delivered over the perineum. This amnesia is both marked and complete in very many cases, and is a most desirable after-effect.

It was not observed that there was any special tendency to post-partum haemorrhage, nor to delayed post-partum haemorrhage. There were two cases of delayed post-partum haemorrhage in the series but these /

these were sufficiently accounted for - both being returned too soon after parturition to the ward from the labour room, and in one of these at least, ergot was forgotten.

Secondly,-the after effects on the child.

The great majority of the children were born vigorous, and if we leave out those cases of still birth, due to other causes, such as albuminuria in the mother, antepartum haemorrhage and breech-deliverances. There were no such cases which could be directly blamed upon the Scopolamine and morphine given. No children were lost. There were, however, 25 per cent of cases which required some slight stimulation to commence respiratory effort - cold water or slapping. But I do not think the percentage is any less in normal labours in which no narcotic has been given.

Asphyxia Cyanotica is said to be common, but I have not found it so.

Now, of contra-indications to the administration of this drug, there are none. Such small doses of morphine will do no harm even in albuminuric and eclamptic cases - indeed morphine may be given for these very cases.

Of course it is obvious that the administration of the drug is useless unless a sufficient time elapses /

elapses between injection and the birth. This time as I have shewn above should not be less than half an hour, and indeed unless such a time had elapsed the case was not noted as a Scopolamine- morphine one.

Now, as to its effect with a general anaesthetic. Chloroform was administered at any time during narcosis with this drug, and indeed it is a valuable preliminary agent before general anaesthetics in major operations.

In the three cases of Caesarean Section performed during the winter quarter in the Royal Maternity Hospital, the usual doses (Scopolamine gr. $\frac{1}{200}$ and morphine gr. $\frac{1}{6}$) were given hypodermically one hour before chloroform anaesthesia was commenced.

It was observed, however, that the pupils were as a rule dilated, and did not react to light very quickly when chloroform was administered later in the narcosis for any purpose such as applying forceps.

This brings up the question of instrumental labour.

Is it possible that Scopolamine-morphine narcosis renders chloroform anaesthesia unnecessary in the application of, and delivery by, forceps?

On several occasions with the patient apparently well under the influence of the narcotic, instruments /

instruments were prepared and attempted to be applied. But the patient always began to struggle and it was found to be impossible to get the forceps into position. Indeed the pain of stretching the vulva sufficiently wide to introduce hand and blade seemed to bring the patient quite out of the narcosis - whilst the same stretching by the head coming down slowly and steadily does not seem to do so. So that this narcosis also requires chloroform when instruments are to be applied.

In several cases - about a dozen I should think - the perineum was very successfully stitched whilst the patient was only under the influence of Scopolamine and Morphine - but of course this counts for very little as some patients will allow the perineum to be stitched immediately after parturition quite readily without an anaesthetic.

The susceptibility to the drug varies within reasonable limits. In two or three cases as I have mentioned above the effect was nil and the injection in the same dosage, was repeated and the effect was normally produced. That is to say certain individuals require a larger dose than others - if therefore the expected result does not ensue in one hour repeat the dose.

In no case of the whole series was excitation produced - although several such cases have been recorded /

corded and though I have seen this occur when the combination was given for other conditions - such as Delirium Tremens, and here again a repetition of the dose gave the required effect.

The danger, however, can be but slight if there was no such case in the series recorded here.

This brings us to the question of the disadvantages of the drug.

Firstly, there is the production of excitement instead of narcosis which is said sometimes to become almost mania - surely this must be almost negligible if it did not occur once in the series I have recorded - there not having even been a case of excitation. Of course even the remote possibility of such an accident happening to a case in private is a distinct disadvantage. But it might be noted that the patient remembers nothing of this when the effects of the drug have passed off, and so such an accident would only be serious because of the effects on the patient's friends and relatives.

Secondly, there is the possibility of still-birth. Again this cannot be a common occurrence.

In all probability this accident occurred not due to the combination of the drug but because of the dosage.

Too large a dose of Morphine would be apt to give such a result and indeed it has occurred to me when giving large doses of morphine for other reasons.

On /

On two occasions Morphine was given for dry labour and in one of these cases the Suppository (Morphine gr. ¼) was repeated and the child when born was cyanosed and required artificial respiration for some time before being revived, and in the other case the child was also still-born though reviving very quickly under the usual stimulants.

Thirdly, there is the loss of power which occurs when the patient is under the influence of this narcotic agent. It is obvious that if the patient be under the influence of a narcotic the voluntary muscles will not be used as well as if the patient were in full possession of her senses, and of course it is impossible to get the patient to pull on a towel fastened to the head of the bed or to "bear-down" as a patient does as a rule herself.

Now the voluntary muscles are of the greatest value to the patient in the 1st stage of labour and so if the drug be given then the labour will be delayed - this I have shewn to be the case since nearly half the cases shew marked delay in the second stage if the Scopolamine-Morphine combination be given too soon. In those cases which were delayed the parts were found to be fully dilated and there was no reason for delay save that the voluntary muscles had failed to do their part in parturition. So long, therefore, as the drug is given so that it only /

only acts during the 2nd stage the loss of power resulting from non-use of the voluntary muscles is not of very much importance.

In a large number of cases too the patient awakes and strains at the acme of the pain, using to a slight extent the voluntary muscles.

The advantages of the drug.

Of these there are very many. In the first place the drug is exceedingly inexpensive and if given in tabloid form is very easily carried about and in this form too it keeps very well.

In the next place it is to be given so well with Chloroform, and indeed it is a very helpful preliminary in the administration of a general anaesthetic. Also less chloroform is required though this is not very marked, though one would expect that much less would require to be given. Also it is extremely unwise to give chloroform over any length of time and as a substitute scopolamine and morphine is excellent. A general anaesthetic may be absolutely contra-indicated in certain cases. Also under Hyoscine-Morphine one could allow the labour to be very much more prolonged than one could otherwise do.

Then the great advantage in private of being able to keep the patient quite quiet by such a simple method is not to be forgotten.

Another /

Another great advantage of this method of narcosis is its excellent effect upon nervous women. Many such women upon arrival into Hospital implore to be given Chloroform and in these the result is excellent as they themselves testify later. Again in certain cases it may be distinctly advantageous to give the drug early - in the 1st stage - with the certain knowledge that when you come back - your experience tells you how long you may stay away in such cases - the parts will be quite ready for the application of forceps.

Again, if such a procedure as the continuous Walcher Position is to be used at all it can only be resorted to along with such a narcotic as is being discussed.

It is now generally conceded that if mother and child-in-utero are both doing well the second stage can last for a very long time without harm. The continuous Walcher Position is used in cases of moderate pelvic contraction and the head is given plen :ty of time to mould and the pelvic brim is enlarged as much as possible. The three cases given below were treated by this method until spontaneous delivery took place.

The first case had a diagonal conjugate diameter of 3½ inches and the second stage lasted over 8 hours and only one dose of scopolamine and morphine was required. Child was born alive and well.

The /

The second case had a diagonal conjugate diameter of 3¾ inches and was in the second stage for over 12 hours and only one dose of the narcotic was required. Child was born alive and well.

The third case came into hospital in labour with the head engaging though not fixed in the brim and so the pelvis could not be measured. The intercristal and interspinous diameter only shewed ½ inch of difference shewing some pelvic contraction. The patient was in the second stage of labour for over 7 hours and only one dose was required. The child, which weighed 8 lbs. 8 ozs., was born alive, and well.

A patient undergoing this treatment is in an unsightly and more or less comfortable attitude for a very long period of time - too long by far for the administration of a general anaesthetic - and only such narcosis as is produced by scopolamine and morphine can be used.

In these three cases the drug was used with most excellent results. Even after being for a whole night in the second stage of labour they remembered nothing of it in the morning. This amnesia therefore produced is not one of the least advantages of the drug. The patient is very delighted to remember nothing of what she knows must have been a very trying time.

Record of Cases

treated by hypodermic injection of Scopolamine $\frac{1}{200}$ grain and morphine $\frac{1}{6}$ grain.

The first twenty five cases had the injection in the first stage when the cervix was taken up and the os admitted two fingers and the interval between the pains not more than fifteen minutes.

The rest of the cases, seventy-six in number had the drug administered when the os uteri was almost fully dilated, and the labour pains very frequent, - that is to say at the beginning of the second stage.

November, 1910.

1. Maggie Kinnaird, aet. 16 - 0 - para
Forceps for delay in 2nd stage.

2. Mary Smith, aet 22 - 0 - para
Normal Labour.

3. Lizzie Kelman, aet 26 - 0 - para
Craniotomy for contracted pelvis.

4. Maggie Walkinshaw, aet 31 - 1 - para
Craniotomy on Head - large child
for Albuminuria, andPreeclampsia.

5. Annie Inglis, aet 32 - 0- para
Forceps for delayed 2nd stage.

6. Bella Keddie, aet 23 1 - para
Normal labour.

7. Mary Polson, aet 20 - 0 - para
Forceps for delayed 2nd stage.

8. Robina Manderson, aet 22 - 0 para
Forceps for delayed 2nd stage.

9. Jeanie Burns - aet - 21 0 - para.
Normal Labour.

10. Mrs Campbell, aet 27 3 - para.
Normal Labour.

11. /

11. Mrs Logan, aet 38 0 - para.
Forceps for Occipito-posterior and dry Labour.

12. Mrs Wilcox, aet 35, 7 - Para.
Spontaneous face case.

13. Minnie Crighton, aet 20 0 - para.
Normal Labour,

14. Margaret McLoughlin, aet 23 - 1 - para.
Normal Labour.

15. Mrs Weir, aet 37 - 0 - Para.
Forceps for delay in 2nd stage.

16. Mrs Simpins, aet 27 - 2 - Para,
Forceps for delay in 2nd stage.

17. Mrs MacLean, aet 21 - 1 para,
Normal Labour, (head on perineum for 1 hour).

18. Mrs Fowler, aet 22 - 0 - para.
Normal Labour.

19. Mary McKenna, aet 19 - 0 - Para
Forceps for delayed 2nd stage.

20. Marian Davidson, aet - 21 0 - Para.
Normal Labour.

21. /

21. Lizzie Barr, aet. 22 0 - Para.
Forceps for delayed 2nd Stage.

22. Mrs Ganseden, aet. 33 8 - Para.
Forceps for delayed Second Stage.

23. Christina Russell, aet. 19 2 - Para
Normal Labour (head on perineum for 1 hour.)

24. Jeanie Packman, aet. 23 1 - Para
Normal Labour.

25. Jeanie McPherson, aet. 26 0 - Para.
Normal Labour.

December, 1910.

26. Fanny Black, aet. 18 0 - Para.
Normal Labour.

27. Effie Forrest, aet. 20 1 - Para.
Forceps for delayed 2nd Stage.

28. Mary Elliot, aet. 24 0 - Para
Forceps for delayed 2nd stage.

29. Mrs Wrench aet. 28 0 - Para.
Normal Labour.

30. Mrs Wilson, aet. 36 0 - Para.
Forceps for delayed 2nd stage.

31. /

31. Mrs Cooper, aet. 22 0 - Para.
Normal Labour.

32. Mrs Gibson, aet. 34 2 Para.
Normal Labour.

33. Mrs Munn, aet. 32 1 Para.
Normal Labour.

34. Mrs Gillies, aet. 18 0 - Para.
Normal Labour.

35. Annie Foy, aet. 23 0 - Para.
Normal Labour.

36. Euphemia Pryde, aet. 30 0 - Para
Forceps for delayed 2nd Stage

37. Annie Hastie, aet. 19 0 - Para
Normal Labour.

38. Mrs Johnstone, aet. 34 1 - Para.
Normal Labour.

39. Mrs Garth, aet. 24 0 - Para.
Normal Labour.

40. Susan Campbell, aet. 31 0 - Para.
Normal Labour.

41. Martha Thompson, aet. 24 0 - Para.
Normal Labour.

42. /

42. Joan Turner, aet. 22 0 - Para.
Normal Labour.

43. Isabella Clarke, aet. 21 0 - Para
Normal Labour.

44. Mrs Way, aet 24 0 - Para.
Normal Labour.

45. Mrs Hay, aet. 35 2 - Para.
Normal Labour.

46. Mrs Cafolla, aet. 36 11 - Para.
Normal Labour.

47. Mrs Hall aet. 27 1 - Para.
Normal Labour.

48. Annie Gilmartin, aet. 29 4 - Para.
Normal Labour.

49. Mrs Raeburn, aet. 18 0 - Para.
Forceps for delayed 2nd Stage.

50. Mary Kennedy, aet. 22 0 - Para.
Normal Labour.

51. Mrs Dickson, aet. 26 2 - Para.
Normal Labour.

52. Bella Aitken, aet. 19 0 - Para.
Forceps for delayed 2nd Stage.

53. /

53. Mrs Kane, aet. 24 1 - Para.
Normal Labour.

54. Helen Rennison, aet. 24 3 - Para
Normal Labour.

55. Thomasina Smith, aet. 27 0 - Para.
Laborious Labour due to Contracted Pelvis. Continuous Walcher Position.

56. Mrs Gibson, aet. 27 2 - Para.
Normal Labour.

57. Mrs Paxton, aet. 27 0 - Para.
Normal Labour.

58. Mrs Herketh, aet. 21 1 - Para
Normal Labour.

59. Archina Beaton, aet. 21 1 Para.
Normal Labour.

60. Annie Gillespie, aet. 19 1 - Para.
Forceps for delayed 2nd Stage.

61. Annie Paterson, aet. 21 0- Para.
Normal Labour.

62. Mrs Higgins, aet. 24 2 - Para.
Normal Labour.

January /

January 1911.

63. Mrs Richard White, aet. 39 0 - Para.
Normal Labour.

64. Maggie Calder, aet. 16 0 - Para.
Forceps for delay in 2nd stage.

65. Mrs MacGregor, aet. 26 2 - Para.
Normal Labour.

66. Mrs John White, aet. 28 2 - Para.
Normal Labour.

67. Mrs Jack, aet. 42 13 - Para.
Normal Labour.

68. Barbara MacLeod, aet. 30 1 - Para.
Normal Labour.

69. Janet MacQuillan, aet. 22 1 - Para.
Normal Labour.

70. Catherine Murray, aet. 21 0 - Para.
Normal Labour.

71. Mrs Wallace, aet. 23 2 - Para.
Normal Labour.

72. Minnie Amos, aet. 22 0 - Para.
Normal Labour.

73. Mary Duncan, aet. 36 0 - Para.
Forceps for delayed 2nd Stage.

74. Vera Niven, aet. 20 0 - Para.
Forceps for occipito-posterior position.

75. Mary Mackie, aet. 18 0 - Para.
Normal Labour.

76. Kate Tough, aet. 17 0-Para.
Normal Labour.

77. Mary Quirk, aet. 20 0 - Para.
Forceps for delayed 2nd Stage.

78. Mrs Cochrane, aet. 36, 4 - Para.
Forceps for inertia uteri due to twins.

79. Kate Sutherland, aet. 20 0 - Para.
Forceps for delay in 2nd Stage.

80. Jessie McQuire, aet. 23 0 - Para
Normal Labour.

81. Mrs Clem. aet. 22 0 - Para.
Normal Labour.

82. Nellie Munro, aet. 20 0 - Para.
Normal Labour.

83. Mrs Broad, aet. 27 2 - Para
Normal Labour.

84. Mrs Coutts, aet. 34 4 - Para.
Laborious Labour from Contracted Pelvis.

85. Mrs Pollock, aet. 32 4 - Para.
Forceps for Laborious Labour from Contracted pelvis.

86. Jessie Landlands, aet. 20 0 - Para.
Laborious Labour.

87. Jessie Buchan, aet. 28 0 - Para
Forceps for delay in 2nd Stage.

88. Mrs Dempster, aet. 30 3 - Para.
Laborious Labour.

89. Christina Bain, aet. 24 0 - Para.
Normal Labour.

90. Mrs Hunter, aet. 22 0 - Para.
Normal Labour.

91. Annie Cowe, aet. 19 0 - Para.
Normal Labour.

92. Mrs Tait, aet. 34 0 - Para.
Forceps for Eclampsia.

93. Mrs MacCafferty, aet. 19 0 - Para.
Forceps for inertia uteri from
Twins.

94. Mrs Josephthal, aet. 35 3 - para.
Laborious Labour from Contracted
Pelvis. Continuous Walcher Position.

95. Mrs Walker, aet. 23 0 - Para
Normal Labour.

96. /

96. Mrs Macintosh, aet. 32 1 - Para.
Normal Labour.

97. Grace Armstrong, aet. 20 0 - Para.
Normal Labour.

98. Helen Thomson, aet. 25 0 - Para.
Normal Labour.

99. Mrs Ramsay, aet. 26 3 - Para.
Normal Labour.

100. Lucy Williamson, aet. 18 0 - Para.
Laborious Labour. Continuous
Walcher Position (Large Child.)

101. Mrs Elder, aet. 16 0 - Para.
Forceps for delay in 2nd stage.

The method adopted for testing the result of the injection was to count six pains, taking their duration and the interval between each before the injection, and then allowing not less than half an hour to elapse before counting the pains subsequent to the injection of the narcotic.

E.g.

Mary MacKenna. aet. 19. primipara.

Time	Duration	Interval.
6.0 p.m.	20 secs.	
6.2	50 secs.	2 mins.
6.4	70 secs.	2 mins.
6.7	50 secs.	3 mins.
6.10	40 secs.	3 mins.
6.12	40 secs.	2 mins.
Scopol. and Morph. given		
	(interval = 43 mins.)	
6.55	65 secs.	
7.0	50 secs.	5 mins.
7.5.	60 secs.	5 mins.
7.10	50 secs.	5 mins.
7.12	30 secs.	2 mins.
7.15	60 secs.	3 mins.

	Average Duration	Average Interval.
Before	45 secs.	2.4 mins.
After	52.5 secs.	4.0 mins.

i.e. The pains lasted longer after the drug /

drug but the interval between was lengthened.

Patient was delivered on Nov. 24th with forceps after being 5 hours 50 minutes in the second stage.

Mary Polson. aet. 20. primipara.

Time	Duration	Interval.
2.14 a.m.	50 secs.	
2.17	50 secs.	3 mins.
2.24	40 Secs.	7 mins.
2.30	40 Secs.	6 mins.
2.34	45 secs.	4 mins.
2.40	45 secs.	6 mins.
	Scopol. and Morph. given	
	(interval = 1 hour 10 mins.)	
3.50	40 secs.	
4.0	45 secs.	10 mins.
4.9	50 secs.	9 mins.
4.14	30 secs.	5 mins.
4.16	30 secs.	2 mins.
4.22	30 secs.	6 mins.

	Average Duration	Average Interval.
Before	45.0 secs.	5.2 mins.
After	37.5 secs	6.4. mins.

In this, the pains lasted for a shorter time, after the injection and the interval between each pain was lengthened.

The membranes ruptured at 10.30 p.m. on November 7th, 1910 and the os uteri became fully dilated about /

about 4.30 a.m. on November 8th, and the labour not being ended at 11 a.m. forceps were applied and the child delivered that day at 11.40 a.m.

Tabulation of Averages -

All these cases had the injection given in the first stage of labour.

	Duration	Interval.
1. Christina Russell -		
	(57.5 secs.	3.4 mins.
	(61.7 secs.	4.4 mins.
2. Mrs Fowler -		
	(31.6 secs.	5.0 mins.
	(54.1 secs.	5.0 mins.
3. Mrs Logan -		
	(47.5 secs.	3.6 mins.
	(36.6 secs.	5.6 mins.
4. Jeanie Burns -		
	(43.7 secs.	12.6 mins.
	(32.5 secs.	11.8 mins.
5. Mary McKenna -		
	(45 secs.	2.4 mins.
	(52.5 secs.	4.0 mins.
6. Jeanie McPherson -		
	(34.1 secs	2.4 mins.
	(31.6 secs.	2.3 mins.
7. Margaret McLoughlin -		
	(37.5 secs.	3.0 mins.
	(45.0 secs.	1.8 mins.

8. /

8. Bella Keddie -

(30.8 secs. 1.6 mins.
(67.5 secs. 2.8 mins.

9. Mary Polson -

(45 secs. 5.2 mins.
(37.5 secs. 6.4 mins.

10. Lizzie Barr -

(61 secs. 3.4 mins.
(61 secs. 5.8 mins.

11. Mrs Simpkins -

(49.1 secs. 6.4 mins.
(48.4 secs. 7.0 mins.

12. Annie Inglis -

(40.0 secs. 5.0 mins.
(33.0 secs. 5.0 mins.

These were all of the cases which were completely taken in the first series and they shew :-

1st. That the duration of each pain was shortened or remained the same in 7 out of the 12 cases.

and 2nd. That the interval between each pain was lengthened or remained the same in 10 out of the 12 cases. Whereas in an ordinary case as parturition approaches, the Duration of the pain lengthens & the interval between is shortened.

In the later cases the pains were not delayed nor was the individual pain shortened in time, and that the Labour as a whole was not delayed was even more strikingly demonstrated by the few cases in which parturition was artificially brought to a conclusion by the application of forceps.

Summary /

Summary and Conclusion.

I would first note that since the dosage has been the same throughout, the results are very comparable.

It has been my experience that the power of the narcotic to abolish pain, and to abolish also remembrance of suffering, when the patient appears to feel pain at the time, is one which can be relied upon.

I have also noted its aid to the subsequent complete anaesthesia by such drugs as chloroform and ether.

I have had no experience of bad effects on mother or on child.

Again, in spontaneous delivery in contracted pelvis by means of the continuous Walcher Position, it is necessary to have at one's command a drug, such as Scopolamine and Morphine, which will give unconsciousness or semi-unconsciousness over a very long period of time, and still entail no risk to mother and child. Chloroform cannot be given over such a period of time, and the patient could not continue in such a position for very long save under some anaesthetic.

But what I have chiefly attempted to shew in this paper is that if given too early the labour will /

will almost certainly be delayed. And I am firmly convinced from my experience that this is so.

The drug must not be given until the 2nd stage, and must have at least half an hour in which to act.

Kerr B. MacClanahan M.B. Cant.

30th March, 1912.